

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	U.S. Patent or Application Kind Code NUMBER (if known)	Name of Patentee or Inventor of Cited Document	Date of Publication or Filing Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
KK	1.	11/326.966	Taylor	01/05/06	
	2.	11/330.877	Matta	01/11/06	
	3.	11/331.789	Matta, et al	01/14/06	
	4.	11/351.104	Tiwari	02/08/06	
	5.	11/377.859	Harkins	03/15/06	
	6.	11/400.165	Tiwari	04/05/06	
	7.	11/445.750	Matta	05/03/06	
	8.	11/417.830	Morain	05/30/06	
_	9.	11/417.993	Jar et al.	05/03/06	
 -	10.	11/437.537	Freund et al.	05/19/06	
	11.	11/437.538	Zeldin	05/19/06	
	12.	11/437.387	Zeldin et al.	05/19/06	
	13. 14.	11/437.582	Bugwadia et al.	05/19/06	
	15.	11/451.704 2004/0143428	Riley Rappaport, et al.	06/12/06 03/13/03	<u> </u>
	16.	2004/0143428	Palm, et al.	09/12/03	
	17.	2005/0059406	Thomson, et al.	09/17/03	
	18.	2005/0059405	Thomson, et al.	09/17/03	
	19.	6,160,804	Ahmed, et al.	11/13/98	
	20.	6,208,629	Jaszewki, et al.	03/10/99	
	21.	6,240,078	Kuhnel, et al.	08/13/98	
	22.	6,256,300	Ahmed, et al.	04/11/00	
	23.	6,317,599	Rappaport, et al.	05/26/99	
	24.	6,347,091	Wallentin, et al.	11/06/98	
	25.	6,512,916	Forbes, Jr.	01/28/03	
	26.	6,631,267	Clarkson, et al.	11/4/99	
	27.	6,659,947	Carter, et al.	07/13/00	
	28.	6,747,961	Ahmed, et al.	04/11/00	
V	29.	6,879,812	Agrawal, et al.	09/17/02	
KK	30.	6,973,622	Rappaport, et al.	09/25/00	<u> </u>

EXAMINER		DATE CONSIDERED
	/Kwasi Karikari/	02/19/2007
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COMPLETE IF KNOWN Application Number 10/666,848 INFORMATION DISCLOSURE **Confirmation Number** 5768 STATEMENT BY APPLICANT Filing Date September 17, 2003 Form PTO-1449 (Modified) (See several sheets if necessary) First Named Inventor Alan Thomson **Group Art Unit** 1746 **Examiner Name** Not Assigned of 6 Attorney Docket No. 43390-8002.US01

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KK	1.	2004/0259555		Rappaport, et al.	12/04	
	2.	2005/0073980		Thomson et al.	4/05	
	3.	2005/0180358		Kolar et al.	8/05	
	4.	3,641,433		Mifflin et al.	2/72	
	5.	4,168,400		De Couasnon et al.	9/79	
	6.	4,176,316		DeRoas et al.	11/79	
	7	4,247,908		Lockart et al.	1/81	
	8	4,291,401		Bachmann	9/81	
	9.	4,291,409	·	Weinberg et al.	9/81	
	10.	4,409,470		Shepard et al.	10/83	
	11.	4,460,120		Shepard et al.	7/84	
	12.	4,475,208		Ricketts	10/84	
•	13.	4,494,238		Groth, Jr.	1/85	
	14.	4,500,987		Hasegawa	2/85	
	15.	4,503,533		Tobagi et al.	3/85	
	16.	4,550,414		Guinon et al.	10/85	
	17.	4,562,415		McBiles	12/85	, , , , , , , , , , , , , , , , , , ,
	18.	4,630,264		Wah	12/86	
	19.	4,635,221		Kerr	1/87	
	20.	4,639,914		Winters	1/87	
	21.	4,644,523		Horwitz	2/87	
	22.	4,672,658		Kavehrad	6/87	
	23.	4,673,805		Shepard et al.	6/87	
	24.	4,707,839		Andren et al.	11/87	
	25.	4,730,340		Frazier	3/88	
	26.	4,736,095		Shepard et al.	4/88	
	27.	4,740,792		Sagey et al.	4/88	
	28.	4,758,717		Shepard et al.	7/88	
	29.	4,760,586		Takeda	7/88	
KK	30.	4,789,983		Acampora et al.	12/88	

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Attorney Docket No.

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KK	31.	4,829,540		Waggener et al.	5/89	
不	32.	4,850,009		Zook et al.	7/89	·
	33.	4,872,182		Mcrae et al.	10/89	
	34.	4,894,842		Brockhaven et al.	1/90	
	35.	4,901307		Gilhousen et al.	2/90	
	36.	4,933,952		Albrieux et al.	6/90	
	37.	4,933,953		Yagi	6/90	
	38.	4,955,053		Simpson et al.	2/91	
	39.	5,008,899		Yamamoto	4/91	
	40.	5,029,183		Tymes	7/91	
	41.	5,103,459		Gilhousen et al.	4/92	
	42.	5,103,461		Tymes	4/92	
	43.	5,109,390		Gilhousen et al.	4/92	
	44.	5,142,550		Tymes	8/92	
	45.	5,151,919		Dent	9/92	
	46.	5,157,687		Tymes	10/92	
	47.	5,187,575		Dent <i>et al</i> .	2/93	
	48.	5,231,633		Hluchyj et al.	7/93	
	49.	5,280,498		Tymes et al.	1/94	<u> </u>
	50.	5,285,494		Sprecher et al.	2/94	
	51.	5,329,531		Diepstraten	7/94	
	52.	5,418,812		Reyes et al.	5/95	
	53.	5,479,441		Tymes et al.	12/95	
	54.	5,488,569		Huang et al.	9/95	
	55.	5,450,615		Fortune <i>et al</i> .	9/95	
	56.	5,465,401		Thompson	11/95	
	57.	5,479,441		Tymes et al.	12/95	
	58.	5,483,676		Mahany et al.	1/96	
V	59.	5,491,644		Pickering et al.	2/96	
KŘ	60.	5,517,495		Lund	5/96	

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ļ			U.	S. PATENT DOCUMENTS	3	
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KK	61.	5,519,762		Bartlett	5/96	
1	62.	5,528,621	1	Heiman et al.	6/96	
	63.	5,561,841		Markus	10/96	
	64.	5,568,513	<u> </u>	Croft et al.	10/96	
	65.	5,598,532		Liron	1/97	
	66.	5,630,207		Gitlin et al.	5/97	
	67.	5,640,414		Blakeney et al.	6/97	•
	68.	5,649,289		Wang et al.	7/97	
	69.	5,668,803	i	Tymes et al.	9/97	
	70.	5,793,303		Koga	8/98	
	71.	5,794,128		Brockel et al.	8/98	
	72.	5,812,589		Sealander et al.	9/98	
	73.	5,815,811		Pinard et al.	9/98	
	74.	5,828,960		Tang et al.	10/98	
	75.	5,584,048		Więczorek	12/96	
	76.	5,844,900		Hong et al.	12/98	
	77.	5,875,179		Tikalsky	1/99	
	78.	5,896,561		Schrader et al.	4/99	
	79.	5,915,214	·	Reece et al.	6/99	
	80.	5,920,821		Seazholtz et al.	7/99	
	81.	5,933,607		Tate et al.	8/99	
	82.	5,949,988		Feisullin et al.	9/99	
	83.	5,953,669		Stratis et al.	9/99	
	84.	5,960,335		Umemoto et al.	9/99	
	85.	5,982,779		Krishnakumar et al.	11/99	
	86.	5,987,062		Engwer et al.	11/99	
	87.	5,987,328		Ephremides et al.	11/99	
	88.	6,005,853		Wang et al.	12/99	
	89.	6,011,784		Brown	1/00	
KK	90.	6,078,568		Wright	6/00	•

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KK	91.		8,591		→—	rompower	7/00		
1	92.	6,11	9,009		В	aranger et al.	9/00		
	93.	6,19	9,032	B1	A	nderson	3/01		
	94.	6,20	8,841		V	/allace et al.	3/01		
	95.	6,20	8,629		J	aszewski <i>et al.</i>	3/01		
	96.	6,21	8,930		K	atzenberg <i>et al</i> .	4/01		
	97	6,24	0,083		V	/right	5/01		
	98.	6,25	6,334	16.5	A	dachi	7/01		۲
	99	6,28	5,662		٧	/atannabe	9/01		
	100	6,33	6,035		S	omoza et al	1/02		
	10	0.05	6,758	B1	A	lmeida <i>et al</i> .	3/02		
	102	0.00	3,290	B1	U	lfongene	5/02		
	103	0.40	4,772	B1	В	each <i>et al.</i>	6/02		
	10	6,47	3,449	B1	C	afarella <i>et al</i> .	10/02		
	10	6,49	3,679	B1	R	appaport et al.	12/02		
	100		6,290	B1	L	ee	12/02		
	10	6,58	0,700	B1	P	inard et al.	6/03		
*	10	6,62	5,454	B1	R	appaport <i>et al.</i>	9/03	v v	
	109	6,65	9,947	B1	C	arter et al.	12/03		
кĸ	110	1 ~ ~ ~	7,498	B1	M	icKenna, <i>et al.</i>	2/04		
					FOF	REIGN PATENT DOCUMENTS			
Examiner Initials*	Cite No.	Fore	eign Patent or App	lication Kind C (if kno	ode	Name of Patentee or Applicant of Cited Document	Date of Publication Date of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т
KK	111.	PCT	WO94/0398			WIPO	2/94		
KK	112.	PCT	WO99/1100	03		WIPO	3/99		

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		OTHER PRIOR ART-NON PATENT LITERATURE DOCUMENTS	
Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume issue number(s), publisher, city and/or country where published.	Т
KK 113		Acampora and Winters, IEEE Communications Magazine, 25(8):11-20 (1987).	
		Acampora and Winters, IEEE Journal on selected Areas in Communications. SAC-5:796-804 (1987).	
	115.	Bing and Subramanian, IEEE, 1318-1322 (1997).	\top
	116.	Durgin, et al., "Measurements and Models for Radio Path Loss and Penetration Loss in and Around Homes and Trees at 5.85 GHz", IEEE Transactions on Communications, vol. 46, No. 11, Nov. 1998.	
	117.	Freret et al., Applications of Spread-Spectrum Radio to Wireless Terminal Communications", Conf. Record, Nat'l Telecom. Conf., Nov. 30- Dec. 4, 1980.	
		Fortune et al., IEEE Computational Science and Engineering, "Wise Design of Indoor Wireless Systems: Practical Computation and Optimization", pg. 58-68 (1995).	
	119.	Geier, Jim, Wireless Lans Implementing Interoperable Networks, Chapter 3 (pp. 89-125) Chapter 4 (pp. 129-157) Chapter 5 (pp. 159-189) and Chapter 6 (pp. 193-234), 1999, United States.	
	120.	Ho et al., "Antenna Effects on Indoor Obstructed Wireless Channels and a Deterministic Image-Based Wide-Based Propagation Model for In-Building Personal Communications Systems", International Journal of Wireless Information Networks, vol. 1, No. 1, 1994.	
		Kim et al., "Radio Propagation Measurements and Prediction Using Three-Dimensional Ray Tracing in Urban Environments at 908 MHz and 1.9 GHz", IEEE Transactions on Vehicular Technology, vol. 48, No. 3, May 1999.	
		Kleinrock and Scholl, Conference record 1977 ICC Volume 2 of 3, June 12-15 Chicago Illinois "Packet Switching in radio Channels: New Conflict-Free Multiple Access Schemes for a Small Number of data Useres", (1977).	
		LAN/MAN Standars Committee of the IEEE Computer Society, Part 11:Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications:Higher Speed Physical Layer Extension in the 2.4 GHz Band, IEEE Std. 802.11b (1999).	
		Okamoto and Xu, IEEE, Proceeding so of the 13th Annual Hawaii International Conference on System Sciences, pp. 54-63 (1997).	
	125.	Panjwani et al., "Interactive Computation of Coverage Regions for Wireless Communication in Multifloored Indoor Environments", IEEE Journal on Selected Areas in Communications, vol. 14, No. 3, Apr. 1996.	
		Perram and Martinez, "Technology Developments for Low-Cost Residential Alarm Systems", Proceedings 1977 Carnahan Conference on Crime Countermeasures", April 6-8, pp. 45-50 (1977).	
ĸĸ		Piazzi et al., "Achievable Accuracy of Site-Specific Path-Loss Predictions in Residential Environments", IEEE Transactions on Vehicular Technology, vol. 48, No. 3, May 1999.	

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				Examiner Name	Not Assigned
Sheet	6	of	6	Attorney Docket No.	43390-8002.US01

KK	128.	Seidel et al., "Site-Specific Propagation Prediction for Wireless In-Building Personal Communications System Design", IEEE Transactions on Vehicular Technology, vol. 43, No. 4, Nov. 1994.	
KK	129.	Skidmore et al., "Interactive Coverage Region and System Design Simulation for Wireless Communication Systems in Multi-floored Indoor Environments, SMT Plus" IEEE ICUPC '96 Proceedings (1996).	
KK	130.	Ullmo et al., "Wireless Propagation in Buildings: A Statistic Scattering Approach", IEEE Transactions on Vehicular Technology, vol. 48, No. 3, May 1999.	

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